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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Attorney Docket No. 053969/0128

Applicant: Takahiro HOSOMI

Title: SPREAD SPECTRUM COMMUNICATION SYSTEM AND METHOD THEREFOR

Serial No.: 09/891,235

Filed: June 27, 2001

Examiner: Unassigned

Art Unit: 2631

INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR §1.56 and 37 CFR §1.97

Commissioner for Patents
Washington, D.C. 20231

Sir:

Submitted herewith on Form PTO SB/08 is a listing of documents known to Applicant in order to comply with Applicant's duty of disclosure pursuant to 37 CFR 1.56. A copy of each listed document is being submitted to comply with the provisions of 37 CFR 1.97 and 1.98.

The submission of any documents herewith, which is not a statutory bar, is not intended as an admission that such document constitutes prior art against the claims of the present application or that such document is considered material to patentability as defined in 37 CFR §1.56(b). Applicant does not waive any rights to take any action which would be appropriate to antedate or otherwise remove as a competent reference any document which is determined to be a prima facie prior art reference against the claims of the present application.

TIMING OF THE DISCLOSURE

The instant Information Disclosure Statement is believed to be filed in accordance with 37 C.F.R. 1.97(b), prior to the mailing date of a first Office Action on the merits (first scenario). If that is not the case, such as in a second scenario in which a first Office Action on the merits has been mailed before the filing of the instant Information Disclosure Statement, then either a certification or fee is required, and a certification is provided below. If neither of the first or second scenarios is the case, such as if a final Office Action or a notice of allowance has been mailed by the PTO (third scenario), then both a certification and fee are required, and in that case a certification is provided below and also the PTO is authorized to obtain the necessary fee to have the instant IDS considered, from Foley & Lardner Deposit Account #19-0741.

CERTIFICATION

The undersigned hereby certifies in accordance with 37 C.F.R. §1.97(e)(1) that items of information A4-A12 listed on the Form PTO SB/08 submitted with this Information Disclosure Statement were first cited in a communication from a foreign patent office in a counterpart foreign application not more than three (3) months prior to the filing of this Statement. Items of information A1 and A2 are U.S. patents that are counterparts to item of information A4 (which is a laid open Japanese patent application), and item of information A3 is a U.S. patent that is a counterpart to item of information A10 (which is a laid open Japanese patent application).

RELEVANCE OF EACH DOCUMENT

A translation of a portion of a Japanese Office Action that issued February 7, 2003 with respect to a counterpart Japanese patent application is provided below.

"Claims: 1–4, 12–15
Cited Literature: 1, 2
Remarks

The Cited Literature 1 (Claims 1 through 4 and Figures 1, 2,

and 4) describes responsive setting of spectrum diffusion signal bandwidth in response to bit error rate, S/N, or other problems with signal reception quality.

Comparison of the invention pertaining to Claims 1–4 and 12–15 of the subject application and the invention described in the Cited Literature 1 reveals a difference in that, in the invention pertaining to Claims 1–4 and 12–15 of the subject application, the signal transmission power of the companion device is controlled according to signal transmission quality, while in the invention described in the Cited Literature 1, there is no description that the signal transmission power of the companion device is controlled according to signal transmission quality.

The Cited Literature 2 (Scope of Patent Claims, paragraphs 0040–0047, and Figures 10 and 11) describes a technical concept wherein a companion station is directed to increase signal reception target power when signal reception quality declines, and this corresponds to control of the signal transmission power of a companion device according to signal transmission quality.

The inventions described in the Cited Literature 1 and the Cited Literature 2 are each intended to ensure signal transmission quality; thus, a person skilled in the art may readily employ the above-noted technical concept described in the Cited Literature 2 as a means to ensure signal transmission quality in the invention described in the Cited Literature 1 and thereby achieve a structure like that in the invention pertaining to Claims 1–4 and 12–15 of the subject application.

Claims: 5, 16
Cited Literature: 1–3
Remarks

Exercise of control reducing signal transmission power in order to increase system capacity while signal transmission quality has not deteriorated is no more than a well-known technology (e.g. Cited Literature 3, Figure 4).

Claims: 6, 7, 17, 18
Cited Literature: 1–5
Remarks

Narrowing of frequency bandwidth to increase system capacity while signal transmission quality has not deteriorated is no more than a well-known technology (e.g. Cited Literature 4, Claim 1 and paragraph 0013, and Cited Literature 5, Claim 1).

Claims: 8, 19
Cited Literature: 1–5
Remarks

Particulars regarding the number of types of signal transmission quality levels are no more than a design matter selected as appropriate by a person skilled in the art in response to control precision relating to assurance of signal transmission quality, control processing load, and other such issues.

Claims: 9–11, 20–22
Cited Literature: 1–5
Remarks

The question of what to employ as means for adjusting frequency bandwidth is no more than a design particular selected as appropriate by a person skilled in the art in response to factors such as the traffic volume required and error resistance.

List of Cited Literature

1. Japanese Unexamined Patent Application Publication H6-14006 (Literature cited in specification of subject application)
2. Japanese Unexamined Patent Application Publication H9-247079
3. Japanese Unexamined Patent Application Publication H6-140976
4. Japanese Unexamined Patent Application Publication H6-46033 (Literature cited in specification of subject application)
5. Japanese Unexamined Patent Application Publication H6-216875

Record of Prior Art Literature Search Results

Fields searched - IPC 7th Ed. - H04J - 13/00–13/06
H04B 1/69–1/713

Prior art literature

Japanese Unexamined Patent Application Publication H7-74725 (selection of a diffusion code used according to narrow bandwidth, medium bandwidth, or broad bandwidth service).

Japanese Unexamined Patent Application Publication H6-276176 (SIR improvement and solution of varying distance problem by assignment of low chip rate for mobile stations with high signal reception strength and assignment of high chip rate for mobile stations with low signal reception strength).

Japanese Unexamined Patent Application Publication H8-70479 (mobile terminal which, when signal reception quality declines, switches by independent determination to channel providing good signal reception quality and notifies base station).

Japanese Unexamined Patent Application Publication H6-252881 (effective utilization of frequency bandwidth by selection of modulation scheme and adjustment of bandwidth in response to signal reception quality)."

Applicant's statements regarding the Japanese Office Action are based on a partial translation that Applicant's representative obtained. These statements should in no way be considered as an agreement by Applicant with, or an admission of, what is asserted in the Japanese Office Action.

Applicant respectfully requests that the listed documents be considered by the Examiner and formally be made of record in the present application and that an initialed copy of Form PTO SB/08 be returned in accordance with MPEP §609.

Respectfully submitted,

26 March, 2003
Date

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PTO/SB/08 (08-00)
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U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

Date Submitted: **March 26, 2003**

(use as many sheets as necessary)

Sheet 1 of 1

Complete if Known	
Application Number	09/891,235
Filing Date	06/27/2001
First Named Inventor	Takahiro HOSOMI
Group Art Unit	2631
Examiner Name	Unknown
Attorney Docket Number	053969-0128

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	U.S. Patent Document Number	U.S. Patent Document Kind Code[2] (*if known*)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	A1	5,321,721		YAMAURA et al.	06/14/1994	
	A2	5,504,776		YAMAURA et al.	04/02/1996	
	A3	5,546,424		MIYAKA	08/13/1996	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.[1]	Foreign Patent Document Office[3]	Number[4]	Kind Code[5] (*if known*)	Name of Patentee or Applicant of Cited Documents	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T[6]
	A4	JP	6-14006			01/21/1994		X
	A5	JP	6-46033			02/18/1994		X
	A6	JP	6-140976			05/20/1994		X
	A7	JP	6-216875			08/05/1994		X
	A8	JP	6-252881			09/09/1994		X
	A9	JP	6-276176			09/30/1994		X
	A10	JP	7-74725			03/17/1995		X
	A11	JP	8-70479			03/12/1996		X
	A12	JP	9-247079			09/19/1997		X

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.	T[6]

Examiner Signature		Date Considered	

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

[1] Unique citation designation number. [2]See attached Kinds of U.S. Patent Documents. [3]Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). [4]For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. [5]Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. [6]Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, D.C. 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, D.C. 20231.